

What is claimed is:

1. An organic electroluminescence device comprising a cathode, an anode and at least one layer comprising a phosphorescent light emitting material and a host material which is sandwiched between the cathode and the anode and further comprising an electron injecting layer which is adhered to the light emitting layer and is capable of transporting electrons, wherein an ionization potential of the host material is 5.9 eV or smaller, and wherein an energy gap of the electron transporting material in the electron injecting layer is smaller than that of the host material in the light emitting layer.
2. An organic electroluminescence device comprising a cathode, an anode and at least one layer comprising a phosphorescent light emitting material and a host material which is sandwiched between the cathode and the anode and further comprising an electron injecting layer which is adhered to the light emitting layer and is capable of transporting electrons, wherein an ionization potential of the host material is 5.9 eV or smaller, and wherein a triplet energy of the electron transporting material in the electron injecting layer is smaller than that of the host material in the light emitting layer.
3. The organic electroluminescence device according to Claim 1 or Claim 2, wherein a reductive dopant is added in either said electron injecting layer or in the interfacial zone between said cathode and a layer adhered to said cathode.

4. The organic electroluminescence device according to Claim 1 or Claim 2, further comprises a hole transporting layer with a phosphorescent light emitting material sandwiched between said cathode and said anode.
5. The organic electroluminescence device according to Claim 4, wherein a triplet energy of the hole transport material in said hole transporting layer is greater than the exciting energy of said phosphorescent light emitting material in said light emitting layer.
6. The organic electroluminescence device according to Claim 1 or Claim 2, wherein the host material in said light emitting layer is capable of transporting electrons.
7. The organic electroluminescence device according to Claim 6, wherein an electron mobility of the host material in said light emitting layer is  $10^{-6} \text{ cm}^2/\text{Vs}$  or greater.
8. The organic electroluminescence device according to Claim 1 or Claim 2, wherein said electron transporting material is a metallic complex positioned with a derivative of a single kind of ring having nitrogen atom.
9. The organic electroluminescence device according to Claim 8, wherein said ring having nitrogen atom is quinoline, phenylpyridine, benzquinoline or phenanthroline.

10. The organic electroluminescence device according to Claim 8, wherein said metallic complex is a metallic complex of quinolinol or its derivative.

11. The organic electroluminescence device according to Claim 1 or Claim 2, wherein said electron transporting material is either a compound obtained by bonding a ring having nitrogen atom with a condensed aromatic ring or a compound obtained by bonding a ring having nitrogen atom to a condensed aromatic ring via arylene group, each ring or group may be substituted.

12. The organic electroluminescence device according to Claim 11, wherein said condensed aromatic ring is naphthalene, anthracene, pyrene, phenanthrene, fluoranthene, chrysene, perylene, naphthacene or pentacene.

13. The organic electroluminescence device according to Claim 11, wherein said ring having nitrogen atom is a condensed ring of five-membered ring and six-membered ring; and the condensed ring has 1 to 4 nitrogen atoms.

14. The organic electroluminescence device according to Claim 1 or Claim 2, wherein said host material is either a compound obtained by bonding carbazolyl group or azacarbazolyl group with a ring having nitrogen atom or a compound obtained by bonding carbazolyl group or

azacarbazolyl group to a ring having nitrogen atom via arylene group, each ring or group may be substituted.

15. The organic electroluminescence device according to Claim 14, wherein said ring having nitrogen atom is pyridine, quinoline, pyrazine, pyrimidine, quinoxaline, triazine, imidazole, imidazopyridine, pyridazine or benzimidazole.